

STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY
CALIFORNIA BUILDING STANDARDS COMMISSION
2525 NATOMAS PARK DR., SUITE 130
SACRAMENTO, CA 95833
(916) 263-0916 Phone
(916) 263-0959 Fax
Email: cbsc@dgs.ca.gov

Office Use Item No. _____

PARTICIPATION COMMENTS FOR THE NOTICE DATED DECEMBER 1, 2009
Written comments are to be sent to the above address.

WRITTEN COMMENT DEADLINE: DECEMBER 16, 2009

Date: 12/16/09

From:

James Mattesich
Name (Print or type)

James Mattesich
(Signature)

Greenberg Traurig on behalf of Asphalt Roofing Manufacturers Association (ARMA)
Agency, jurisdiction, chapter, company, association, individual, etc.

1201 K Street, Suite 1100, Sacramento, CA 95814

Street

City

State

Zip

I/We ~~(do)~~ (do not) agree with:

☒ [X] The Agency proposed modifications As Submitted on Section No. Section A4.1.6.5 and A4.1.6.5.1

and request that this section or reference provision be recommended:

☐ [] Approved ☒ [X] Disapproved ☒ [X] Held for Further Study ☐ [] Approved as Amended

Suggested Revisions to the Text of the Regulations:

Reason: [The reason should be concise if the request is for "Disapproval," "Further Study," or "Approve As Amend" and identify at least one of the 9-point criteria (following) of Health and Safety Code §18930.]

Pleas see attached letter.

HEALTH & SAFETY CODE SECTION 18930

SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

- (a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:
- (1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
 - (2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
 - (3) The public interest requires the adoption of the building standards.
 - (4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
 - (5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
 - (6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
 - (7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
 - (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
 - (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
 - (8) The format of the proposed building standards is consistent with that adopted by the commission.
 - (9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.

JAMES M. MATTESICH
Tel: (916) 442-1111
mattesichj@gtlaw.com

December 16, 2009

VIA E-MAIL (CBSC@dgs.ca.gov) AND REGULAR MAIL

California Building Standards Commission
2525 Natomas Park Dr., Suite 130
Sacramento, CA 95833
Attention: Dave Walls, Executive Director

RE: **Proposed Building Standards of the Department of Housing and Community Development (HCD) Title 24 Part 11**

Dear Mr. Walls:

We represent the Asphalt Roofing Manufacturers Association (ARMA). ARMA's members are the nation's manufacturers of steep and low slope asphalt roofing. Asphalt shingles cover four out of five homes in the United States, and last year almost five hundred million square feet of shingles were applied in the state of California alone.

ARMA respectfully asks that the Commission withdraw, and not adopt, the proposed amendments to the Building Standards Code which relate to the HCD A4.1.6.5 "Cool Roof" model standards ("Tier 2") contained in Part 19 of the December 1, 2009 "Revised Express Terms - 15 Day Modifications." (See Exhibit A.) Those "15 day" noticed changes do not meet the legal standards imposed upon the Commission by the California Administrative Procedure Act, and the Health and Safety Code.

I

The proposed changes to the regulations are substantial and should be subject to a complete 45 day comment period:

Govt. Code §11346.8(c) provides that "no agency may adopt ... a regulation which has been changed from that which was originally made available to the public" unless the change is "nonsubstantial" or the public was "placed on notice" that the change could result. This requirement is critical in that:

ALABAMA
ALASKA
ARIZONA
ARKANSAS
CALIFORNIA
COLORADO
CONNECTICUT
DELAWARE
DISTRICT OF COLUMBIA
FLORIDA
GEORGIA
HAWAII
ILLINOIS
INDIANA
IOWA
KANSAS
KENTUCKY
LOUISIANA
MAINE
MARYLAND
MASSACHUSETTS
MICHIGAN
MINNESOTA
MISSISSIPPI
MISSOURI
MONTANA
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
NORTH CAROLINA
NORTH DAKOTA
OHIO
OKLAHOMA
OREGON
PENNSYLVANIA
RHODE ISLAND
SOUTH CAROLINA
SOUTH DAKOTA
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

[o]ne purpose of the APA is to ensure that those persons or entities whom a regulation will affect have a voice in its creation The Legislature wisely perceived that the party subject to regulation is often in the best position, and has the greatest incentive, to inform the agency about possible unintended consequences of a proposed regulation. Moreover, public participation in the regulatory process directs the attention of agency policymakers to the public they serve, thus providing some security against bureaucratic tyranny. (*Tidewater Marine Western, Inc. v. Bradshaw*, 14 Cal.4th 557, 568-569 (1996)(citations omitted).)

Adoption of the proposed regulations violates §11346.8(c) because the changes between the originally noticed version and the current version of the regulations are substantial, contain entirely new and additional provisions, and such changes require full notice and comment be provided to members of the public pursuant to the APA.

In the published “Rationale for Change” HCD states “HCD is proposing amendments . . . to include printed values to replace the ‘to be determined’ placeholder in the original proposal”. What that means is extraordinary. In the 45 full notice period there were no numerical standards proposed in “Tier 2.” Now, however, after giving the regulated public only 15 days notice, critical and substantive roofing material standards are proposed for the first time.

In addition, the 15 day noticed version of the proposal, for the first time, includes a new “inspection” requirement. It states:

A4.1.6.5.1 Verification. Inspection shall be conducted to ensure roofing materials meet cool roof aged solar reflective and thermal emittance or SRI values. (emphasis added)

HCD states in its “rationale for change” that it is making this change “to add a clarifying section that verification is required.” (Emphasis added). Let us be clear. A brand new inspection “requirement” is not “clarifying.” It is a substantive, mandatory provision. It did not exist in the 45 day noticed version of these proposed regulations. No member of the public or the regulated community could have been adequately placed on notice, by the total absence of a testing provision, that one could result from the original proposal. Moreover, this mandate will result in costs which have not been assessed or even addressed in the rule making record. As such, this proposal also violates the relevant provision of both the Health and Safety Code and the Government Code.

Unfortunately, the attempted use of a 15 day notice has thus resulted in both an unfair and unlawful regulation adoption process, as well as an unwarranted and factually unsupported regulatory proposal.

II

The proposed changes to the regulation fail to meet the requirements of the Health and Safety Code as well as the Government Code.

Health and Safety Code section 18930(a) requires that the Commission only approve proposed building standards which, among other requirements, are not unreasonable, arbitrary, unfair, or capricious in whole or in part,” and only where the “cost to the public is reasonable.” These proposed regulations do not meet those standards. We know of no facts in the rulemaking record which would support the necessity for the proposed solar reflectance, thermal emittance and the SRI values for Table A4.1.6.5(2) “Tier 2.” In fact, the published proposed SRI value of “29” is patently erroneous.

The proposal is arbitrary in the choices of values proposed in Table A4.1.6.5(2) “Tier 2.” The cost to the public, if these values are allowed to stand, will be unreasonable, as builders will not have sufficient numbers of roofing products available to them to meet these standards.

The proposal seems to have been derived from an examination of the Cool Roof Rating Council’s (CRRC) website. The Tier 2 proposals call for “minimum 3-year aged” solar reflectance and thermal emittance values. However, from the CRRC’s own directory, no products are found to match the exact criteria using aged values. CRRC does have 61 products with initial values similar to those of the aged values; however, all but 2 have pending aged values - and it should be recognized that the 2 with aged values do not meet the criteria set in Tier 2. (See Exhibit B.)

Because of the Commission’s use of the 15 day adoption process, we have not had sufficient time to conduct a complete analysis of the legal and practical consequences of the most recent proposal embodied in the proposed Tier 2. Nevertheless, there appear to be several significant issues which must be further addressed.

The following issues and comments are not intended to be exhaustive, but are reasons why the BSC/HCD should withdraw the Tier 2 proposal:

1. It appears to us that the proposed SRI increase for low slope roofs is 22% higher than the 2008 Title 24 Values and the steep slope SRI is

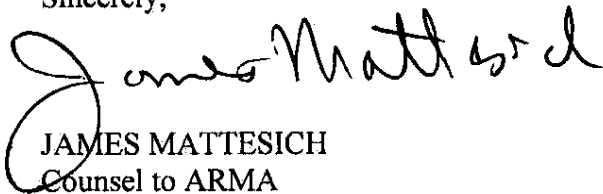
approximately 30% higher. No facts or data in the rulemaking record support such a proposal.

2. There is no technical basis/cost justification for the Tier 2 requirements in many of the geographical areas listed in the table for Tier 2 compliance and in fact, there is a financial penalty for the property owner.
3. There is no demonstrated cost justification to substantiate these proposals and in fact, the requirements can be considered burdensome to consumers based on the CEC's work on geographical limitations.
4. AT BEST, 86% of the "available" products in the CRRC database are considered low slope/commercial products and are not typically used on conventional steep slope applications - e.g., homes.
5. The only product type that can be considered "standard" for a steep slope application that meets these requirements is metal... and there are fire performance issues with metal roofs, especially in California, with the prevalence of urban wildfires.
6. Lastly, there appears to be no trade-off or consideration given for use of insulation - which can be a much more cost-effective method of reducing energy consumption for a conditioned building. Instead, this proposal relies upon arbitrarily set reflectivity values with no consideration for the total building envelope approach to energy efficiency.

ARMA would like an opportunity to address these issues and to work cooperatively with the Commission and HCD as part of the adoption process. The Commission's 15 day notice approach prevents such a meaningful opportunity.

Please do not hesitate to contact me if you have any questions.

Sincerely,



JAMES MATTESICH
Counsel to ARMA

cc: Doug Hensel, California Department of Housing and Community Development
James Baker, ARMA
ARMA CRSG

EXHIBIT A

Rationale for change:

HCD is proposing amendments to this section based on comments received. HCD received a comment stating this requirement may create a problem for persons with disabilities. HCD believes that provisions of Section 101.6.1 cover this issue. However, HCD also wants to ensure that the provisions for disabled access are properly addressed and chooses to also include a pointer to the requirement of the California Building Code. There is no change in regulatory effect because the disabled access provisions are already in effect and are specific.

19. Amend Section A4.1.6.5 and Tables A4.1.6.5(1) and A4.1.6.5(2) follows:

A4.1.6.5 Cool roof. Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum aged Solar Reflectance index (SRI) equal to or greater than the values specified in Table 4.1.6.4 5(1) for Tier 1 and Table 4.1.6.5(2) for Tier 2.

Exceptions:

1. Install roof constructions that have a thermal mass over the roof membrane with a weight of at least 25 lb/sf.
2. Install a combination of highly reflective and roof constructions with thermal mass over the roof membrane with a weight of at least 25 lb/sf.

TABLE A4.1.6.5(1)**Tier 1**

<u>Roof Slope</u>	<u>Roof Weight</u>	<u>Climate Zone</u>	<u>Minimum 3-year Aged</u>		
			<u>Minimum 3-year Aged Solar Reflectance</u>	<u>Thermal Emittance</u>	<u>SRI</u>
$\leq 2:12$	N/A	2 13&15	0.55	0.75	64
$> 2:12$	$< 5 \text{ lbs./ft}^2$	2 10-15	0.20	0.75	16
	$\geq 5 \text{ lbs./ft}^2$	1-16	0.15	0.75	10

TABLE A4.1.6.5 (2)**Tier 2**

<u>Roof Slope</u>	<u>Roof Weight</u>	<u>Climate Zone</u>	<u>Minimum 3-year Aged</u>		
			<u>Minimum 3-year Aged Solar Reflectance</u>	<u>Thermal Emittance</u>	<u>SRI</u>
$\leq 2:12$	N/A	4-16 2,4,6-15	TBD 0.65	TBD 0.85	78
$> 2:12$	N/A	4-16 2,4,6-15	TBD 0.25	TBD 0.85	29

A4.1.6.5.1 Verification. Inspection shall be conducted to ensure roofing materials meet cool roof aged solar reflectance and thermal emittance or SRI values.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Sections 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.

Rationale for change:

HCD is proposing amendments to Section A4.1.6.5 based on comments received in order to correct a typographical error. In addition, HCD is proposing to modify the Tier 1 table to gain consistency with the values used in Title 24, Part 6. HCD is also proposing amendments to limit the applicable climate zones to cooling zones in the Tier 2 table and include printed values to replace the "To Be Determined" placeholder in the original proposal. Lastly, HCD is proposing to add a clarifying section stating that verification is required.

EXHIBIT B

From the CRRC's Own Directory—No products are found to match the exact criteria using aged values:

Rated Products Directory: Search Results [[new search](#)]

(last updated 11 Dec 2009)

Showing Search Results for:

Product Type: Shingles or Shakes, Shingles, Shakes, Tile or Slate

Aged Solar Reflect.: $\geq .25$

Aged Therm. Emit.: $\geq .85$

select * from products where(type like 'Shingles or Shakes%' or type like 'Shingles, Shakes, Tile or Slate%') and solar_reflect_3yr >= '.25' and therm_emit_3yr >= '.85' order by company_name asc

No matching records found for your search.

CRRC does have 61 products with initial values similar to those of the aged values; however all but 2 have pending aged values—and it should be noted that the 2 with aged values do not meet the criteria set in Tier Two.

Rated Products Directory: Search Results [[new search](#)]

(last updated 11 Dec 2009)

Showing Search Results for:

Product Type: Shingles or Shakes, Shingles, Shakes, Tile or Slate

Init. Solar Reflect.: $\geq .25$

Init. Therm. Emit.: $\geq .85$

Slope: Steep

select * from products where(type like 'Shingles or Shakes%' or type like 'Shingles, Shakes, Tile or Slate%') and solar_reflect_init >= '.25' and therm_emit_init >= '.85' and slope like '%Steep%' order by company_name asc

CRRC Prod. ID	Manufacturer Information (sorted +)	Brand	Model	Color	Product Type	Solar Reflect.		Therm Emit.		Slope Application
						Init	3 yr	init	3 yr	
0916-0002	Armorlite Roofing Technology, LLC Amit Rao (714-835-7575)	<u>Armorlite</u>	Satin Copper	Metallic	Shingles, Shakes, Tile or Slate	0.46	pending	0.93	pending	Steep
0916-0001	Armorlite Roofing Technology, LLC Amit Rao (714-835-7575)	<u>Armorlite</u>	Patina	Green	Shingles, Shakes, Tile or Slate	0.44	pending	0.93	pending	Steep
0916-0003	Armorlite Roofing Technology, LLC Amit Rao (714-835-7575)	<u>Armorlite</u>	Golden Pond	Brown	Shingles, Shakes, Tile or Slate	0.37	pending	0.92	pending	Steep
0668-0071	CertainTeed Corporation Richard A. Snyder (215-274-	<u>CertainTeed</u>	Oxford, NC Landmark Mist White	Off-White	Shingles or Shakes	0.26	pending	0.92	pending	Steep

	2350)									
0668-0070	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Oxford, NC Landmark Silver Birch	Off-White	Shingles or Shakes	0.26	pending	0.91	pending	Steep
0668-0041	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Oxford, NC XT25 Star White	Off-White	Shingles or Shakes	0.27	pending	0.90	pending	Steep
0668-0037	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Avery, OH XT30 AR Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0038	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Norwood, MA XT25 AR Star White	Off-White	Shingles or Shakes	0.25	pending	0.88	pending	Steep
0668-0035	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Avery, OH XT25 Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0043	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Oxford, NC XT30 AR Star White	Off-White	Shingles or Shakes	0.29	pending	0.90	pending	Steep
0668-0039	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Norwood MA XT30 AR Star White	Off-White	Shingles or Shakes	0.25	pending	0.89	pending	Steep
0668-0036	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Avery, OH XT25 AR Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0042	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Oxford, NC XT25 AR Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0073	CertainTeed Corporation Richard A. Snyder (215-274-	<u>CertainTeed</u>	Shakopee, MN Landmark Silver Birch	Off-White	Shingles or Shakes	0.27	pending	0.90	pending	Steep

	2350)									
0668-0072	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Portland, OR Landmark Silver Birch	Off-White	Shingles or Shakes	0.26	pending	0.90	pending	Steep
0668-0044	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Portland, OR CT20 Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0045	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Portland, OR XT30 Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0048	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Shreveport, LA XT25 Star White	Off-White	Shingles or Shakes	0.27	pending	0.88	pending	Steep
0668-0047	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Shakopee, MN XT30 AR Star White	Off-White	Shingles or Shakes	0.27	pending	0.90	pending	Steep
0668-0046	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Shakopee, MN XT25 Star White	Off-White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0668-0057	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Dusky Clay	Brown	Shingles or Shakes	0.26	pending	0.93	pending	Steep
0668-0068	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Avery, OH Landmark Star White	Bright White	Shingles or Shakes	0.27	pending	0.93	pending	Steep
0668-0069	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Norwood, MA Landmark Silver Birch	Off-White	Shingles or Shakes	0.25	pending	0.90	pending	Steep
0668-0056	CertainTeed Corporation Richard A. Snyder (215-274-	<u>CertainTeed</u>	Landmark Solaris Sunset Shake	Tan	Shingles or Shakes	0.26	pending	0.92	pending	Steep

	2350)									
0668-0055	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Aged Cedar	Grey	Shingles or Shakes	0.26	pending	0.92	pending	Steep
0668-0050	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Max Def Weathered Wood	Yellow, Grey, Black, Brown, Multicolor	Shingles or Shakes	0.25	pending	0.90	pending	Steep
0668-0058	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Crystal Gray	Grey	Shingles or Shakes	0.27	pending	0.92	pending	Steep
0668-0053	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Max Def Heather Blend	Orange, Grey, Brown, Multicolor	Shingles or Shakes	0.25	pending	0.93	pending	Steep
0668-0052	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Max Def Burnt Sienna	Tan, Black, Brown, Multicolor	Shingles or Shakes	0.26	pending	0.91	pending	Steep
0668-0051	CertainTeed Corporation Richard A. Snyder (215-274-2350)	<u>CertainTeed</u>	Landmark Solaris Max Def Resawn Shake	Orange, Yellow, Tan, Brown, Multicolor	Shingles or Shakes	0.26	pending	0.88	pending	Steep
0676-0034	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Marquis Weathermax</u>	White		Shingles or Shakes	0.25	pending	0.85	pending	Steep
0676-0033	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Royal Sovereign</u>	White		Shingles or Shakes	0.27	pending	0.91	pending	Steep
0676-0035	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Sentinel</u>	White		Shingles or Shakes	0.27	pending	0.91	pending	Steep
0676-0052	GAF Materials	<u>Timberline Cool Series</u>	Cool Barkwood	Tan	Shingles or	0.27	pending	0.90	pending	Steep

	Corp Beth McSorley (973-872-4421)				Shakes					
0676-0055	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Cool Series</u>	Cool Weathered Wood	Tan	Shingles or Shakes	0.27	pending	0.88	pending	Steep
0676-0050	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Cool Series</u>	Cool Antique Slate	Grey	Shingles or Shakes	0.28	pending	0.92	pending	Steep
0676-0030	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Prestique 30</u>	White		Shingles or Shakes	0.26	pending	0.85	pending	Steep
0676-0042	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Prestique 40</u>	Cool Weathered Wood		Shingles or Shakes	0.26	pending	0.92	pending	Steep
0676-0031	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Prestique 40</u>	White		Shingles or Shakes	0.26	pending	0.85	pending	Steep
0676-0043	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Prestique 40</u>	Cool Antique Slate		Shingles or Shakes	0.27	0.26	0.92	0.81	Steep
0676-0041	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Prestique 40</u>	Cool Barkwood		Shingles or Shakes	0.27	0.26	0.92	0.81	Steep
0676-0032	GAF Materials Corp Beth McSorley (973-872-4421)	<u>Timberline Prestique Lifetime</u>	White		Shingles or Shakes	0.26	pending	0.85	pending	Steep

0850-0013	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Dura Seal 20</u>	Dove White	Bright White, Off-White	Shingles or Shakes	0.26	pending	0.91	pending	Steep
0850-0017	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis</u>	Tumbleweed	Blue, Tan, Brown, Multicolor	Shingles or Shakes	0.26	pending	0.91	pending	Steep
0850-0012	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis</u>	Adobe	Red, Orange, Tan, Multicolor	Shingles or Shakes	0.28	pending	0.91	pending	Steep
0850-0011	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis</u>	Desert Jewel	Red, Blue, Tan, Multicolor	Shingles or Shakes	0.28	pending	0.90	pending	Steep
0850-0010	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis</u>	Mesquite	Tan, Brown	Shingles or Shakes	0.28	pending	0.89	pending	Steep
0850-0015	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis</u>	Agave	Blue, Bright White, Off-White, Grey	Shingles or Shakes	0.25	pending	0.92	pending	Steep
0850-0016	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis</u>	Desert White	Off-White, Grey	Shingles or Shakes	0.26	pending	0.91	pending	Steep
0850-0018	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis Premium</u>	Mesquite	Tan, Brown	Shingles or Shakes	0.28	pending	0.93	pending	Steep
0850-0019	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis Premium</u>	Tumbleweed	Blue, Tan, Brown, Multicolor	Shingles or Shakes	0.26	pending	0.93	pending	Steep
0850-0020	Malarkey Roofing Products Bill Morgan ((503) 240-7842)	<u>Ecoasis Premium</u>	Agave	Blue, Bright White, Off-White, Grey	Shingles or Shakes	0.27	pending	0.92	pending	Steep

0850-0014	Malarkey Roofing Products Bill Morgan (503) 240-7842)	<u>Highlander-CS</u>	Dove White	Bright White, Grey	Shingles or Shakes	0.27	pending	0.90	pending	Steep
0890-0001	Owens Corning Darrel Higgs (419-248-7060)	<u>Classic (R)</u>	Shasta White	Bright White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0890-0007	Owens Corning Darrel Higgs (419-248-7060)	<u>Duration</u>	Shasta White	Bright White	Shingles or Shakes	0.25	pending	0.94	pending	Steep
0890-0006	Owens Corning Darrel Higgs (419-248-7060)	<u>Duration™ Premium</u>	Cool Shingles Sunrise	Red, Orange, Yellow, Multicolor	Shingles or Shakes	0.26	pending	0.89	pending	Steep
0890-0005	Owens Corning Darrel Higgs (419-248-7060)	<u>Duration™ Premium</u>	Cool Shingles Frosted Oak	Tan	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0890-0004	Owens Corning Darrel Higgs (419-248-7060)	<u>Duration™ Premium</u>	Cool Shingles Harbor Fog	Grey	Shingles or Shakes	0.27	pending	0.89	pending	Steep
0890-0003	Owens Corning Darrel Higgs (419-248-7060)	<u>Duration™ Premium</u>	Cool Shingles Sage	Green	Shingles or Shakes	0.27	pending	0.90	pending	Steep
0890-0002	Owens Corning Darrel Higgs (419-248-7060)	<u>Oakridge (R) (Oakridge(R) PRO 30))</u>	Shasta White	Bright White	Shingles or Shakes	0.27	pending	0.89	pending	Steep
1018-0006	PABCO Sid Dinwiddie (253-284-1255)	<u>PABCO(R)</u>	SG-30 Star White	Off-White	Shingles or Shakes	0.26	pending	0.90	pending	Steep